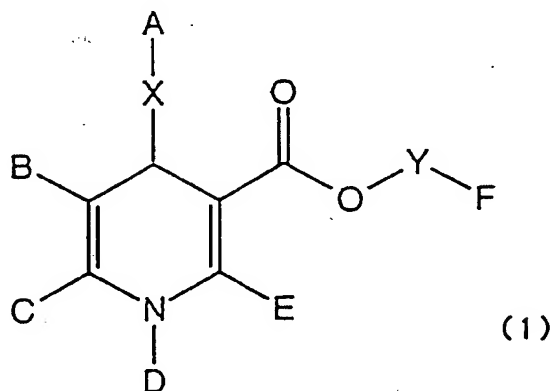


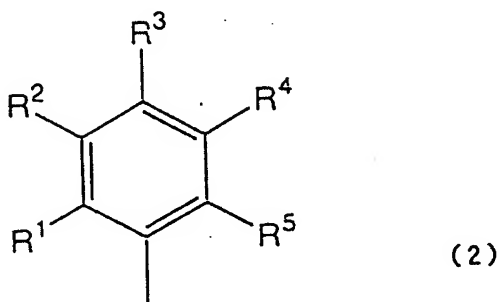
IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): A dihydropyridine of formula (1) or a pharmaceutically acceptable salt thereof:



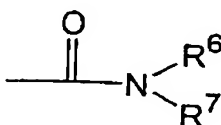
wherein A represents a group of formula (2), or 1-naphthyl, 2-naphthyl, thiophene-3-yl, thiophene-2-yl, furan-3-yl, furan-2-yl, pyridine-4-yl, pyridine-3-yl, pyridine-2-yl, indole-2-yl or indole-3-yl group:



wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> may be the same or different from each other and each represent hydrogen atom, a halogen atom, hydroxyl group, carboxyl group, amino group, cyano group, nitro group, a lower alkyl group, a lower alkoxy group, a lower alkenyl group, a lower alkynyl group, a lower alkylamino group, a lower alkylthio group, a lower alkanoyl

group, a lower alkoxy-carbonyl group, a hydroxy-lower alkyl group, a hydroxy-lower alkoxy group, a hydroxy-lower alkenyl group, a halogeno-lower alkyl group, a halogeno-lower alkoxy group, a halogeno-lower alkenyl group, an aryl group, an aryl-lower alkoxy group or an aroyl group,

B represents cyano group, nitro group, carboxyl group, acetyl group or a group of formula (3):



wherein R<sup>6</sup> and R<sup>7</sup> may be the same or different from each other and each represent hydrogen atom, a lower alkyl group, an amino-lower alkyl group, an amino-lower alkyl group substituted with one or two lower alkyl groups, a carboxy-lower alkyl group, a hydroxy-lower alkyl group, a lower cycloalkyl group, an amino-lower alkenyl group, a carboxy-lower alkenyl group, a hydroxy-lower alkenyl group, an aryl group, a substituted or unsubstituted heteroaryl pyridyl group, a substituted or unsubstituted furyl group, an aryl-lower alkyl group, a substituted or unsubstituted heteroaryl-lower pyridyl-lower alkyl group, a substituted or unsubstituted furyl-lower alkyl group, a lower alkyl group substituted with a cyclic alkyl group which may have a hetero atom in the ring, an aryl-lower alkenyl group or an aryl-lower alkyloxycarbonyl-lower alkyl group, or R<sup>6</sup> and R<sup>7</sup> may together form a ring which may contain a hetero atom and when the hetero atom is nitrogen atom, it may have a substituent,

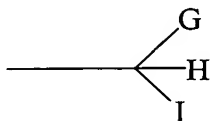
C and E may be the same or different from each other and each represent hydrogen atom[[,]]; a lower alkyl group[[,]]; dimethoxymethyl group[[,]]; cyano group[[,]]; a hydroxy-lower alkyl group[[,]]; a carboxy-lower alkyl group[[,]]; a halogeno-lower alkyl group[[,]]; an

amino-lower alkyl group, in which the amino group may be substituted with one or two of a lower alkyl group, a lower cycloalkyl group, an aryl group or an aryl-lower alkyl group[[],]; an azido-lower alkyl group[[],]; an aryl group[[],]; a substituted or unsubstituted heteroaryl pyridyl group[[],]; a substituted or unsubstituted furyl group; an aryl-lower alkyl group[[],]; a substituted or unsubstituted heteroaryl-lower pyridyl-lower alkyl group[[],]; a substituted or unsubstituted furyl-lower alkyl group; a lower alkyl group substituted with a cyclic alkyl group which may contain a hetero atom in the ring[[],]; a substituted or unsubstituted heteroaryl-lower pyridyl-lower alkoxymethyl group[[],]; a substituted or unsubstituted furyl-lower alkoxymethyl group; a pyridinylethoxymethyl group; a lower alkoxymethyl group substituted with a cycloalkyl group which may contain a hetero atom in the ring[[],]; or a carbamoyl-lower alkyl group, in which the carbamoyl group may be substituted with one or two of a lower alkyl group, a lower cycloalkyl group, an aryl group or an aryl-lower alkyl group,

D represents a hydrogen atom, a lower alkyl group, a hydroxy-lower alkyl group or an aryl-lower alkyl group,

F represents a group of formula (4):

(4)



wherein G and H may be the same or different from each other and each represent phenyl group, benzyl group, 1-naphthyl group, 2-naphthyl group, thiophene-3-yl group, thiophene-2-yl group, furan-3-yl group, furan-2-yl group, pyridine-4-yl group, pyridine-3-yl

group, pyridine-2-yl group, pyridine-4-ylmethyl group, pyridine-3-ylmethyl group or pyridine-2-ylmethyl group, I represents hydrogen atom or hydroxyl group,

X represents an interatomic bond,  $-\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}=\text{CH}-$  or  $-\text{C}\equiv\text{C}-$ , and

Y represents an alkylene group having 1 to 7 carbon atoms, which may contain a hetero atom or cyclopropane ring in the chain, or an alkenylene group, which may contain a hetero atom or cyclopropane ring in the chain.

Claim 2 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1, wherein B represents carboxyl group, cyano group or a group represented by formula (3), D represents hydrogen atom, G and H each represent phenyl group, and Y represents an alkyl group having 2 or 3 carbon atoms.

Claim 3 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 2, wherein A represents a group of formula (2) and X represents an interatomic bond.

Claim 4 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 3, wherein B represents carboxyl group or a group of formula (3).

Claim 5 (currently amended): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 3, wherein C and E may be the same or different from each other and each represent a lower alkyl group, a lower alkyl group substituted with a cyclic alkyl group, which may contain a hetero atom in the ring, a hydroxy-lower alkyl group, an aryl-

lower alkyl group or, a ~~heteroaryl-lower~~ pyridyl-lower alkyl group, or a furyl-lower alkyl group.

Claim 6 (currently amended): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 5, wherein A represents a group of formula (2) wherein R<sup>1</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> each represent hydrogen atom and R<sup>2</sup> represents chlorine atom, bromine atom, iodine atom, nitro group or cyano group, C and E may be the same or different from each other, and they each represent methyl group, ethyl group, a lower alkyl group substituted with a cycloalkyl group which may contain a hetero atom in the ring, a hydroxy-lower alkyl group, an aryl-lower alkyl group or, a ~~heteroaryl-lower~~ pyridyl-lower alkyl group, or a furyl-lower alkyl group, and I represents hydrogen atom.

Claim 7 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 6, wherein B represents carboxyl group.

Claim 8 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 6, wherein A represents a group of formula (2) wherein R<sup>1</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> each represent hydrogen atom and R<sup>2</sup> represents chlorine atom, bromine atom, iodine atom or nitro group, C represents methyl group, ethyl group or 2-piperidinoethoxymethyl group, and E represents methyl group, ethyl group, dimethoxymethyl group, 2-piperidinoethoxymethyl group, 2-hexamethyleneiminoethoxymethyl group, methoxymethyl group, 2-benzyloxyethoxymethyl group, 2-(2-pyridyl)ethoxymethyl group or 2-hydroxyethoxymethyl group.

Claim 9 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 8, wherein B represents carboxyl group.

Claim 10 (currently amended): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 3, wherein C represents hydrogen atom, a lower alkyl group, dimethoxymethyl group, cyano group, a hydroxy-lower alkyl group, a halogeno-lower alkyl group, an amino-lower alkyl group (in which the amino group may be substituted with one or two of a lower alkyl group, a lower cycloalkyl group, an aryl group and an aryl-lower alkyl group), an azido-lower alkyl group, an aryl group, a ~~heteroaryl~~ pyridyl group, a furyl group, an aryl-lower alkyl group, a ~~heteroaryl-lower~~ pyridyl-lower alkyl group, a furyl-lower alkyl group, a lower alkyl group substituted with a cyclic alkyl group (which may contain a hetero atom in the ring) or a carbamoyl-lower alkyl group (in which the carbamoyl group may be substituted with one or two of a lower alkyl group, a lower cycloalkyl group, an aryl group and an aryl-lower alkyl group), and E represents methyl group, ethyl group, a lower alkoxymethyl group, a hydroxy-lower alkoxymethyl group, an aryl-lower alkoxymethyl group, a ~~heteroaryl-lower~~ pyridyl-lower alkoxymethyl group, a furyl-lower alkoxymethyl group, or a lower alkoxymethyl group substituted with a cycloalkyl group (which may contain a hetero atom in the ring).

Claim 11 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 10 wherein B represents carboxyl group.

Claim 12 (currently amended): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1 wherein A represents a group of formula (2), B represents carboxyl group, cyano group or a group of formula (3), D represents hydrogen atom, C and E

may be the same or different from each other, and they each represent a lower alkyl group, a lower alkyl group substituted with a cycloalkyl group, which may contain a hetero atom in the ring, an aryl-lower alkyl group, a ~~heteroaryl-lower~~ pyridyl-lower alkyl group, a furyl-lower alkyl group, or a hydroxy-lower alkyl group, and X represents an interatomic bond.

Claim 13 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 12, wherein B represents carboxyl group.

Claim 14 (currently amended): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 13 wherein A represents a group of formula (2) wherein R<sup>1</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> each represent hydrogen atom and R<sup>2</sup> represents chlorine atom, bromine atom, iodine atom or nitro group, C represents methyl group, ethyl group or 2-piperidinoethoxymethyl group, and E represents a lower alkyl group, a lower alkyl group substituted with a cycloalkyl group which may contain a hetero atom in the ring, an aryl-lower alkyl group, a ~~heteroaryl-lower~~ pyridyl-lower alkyl group, a furyl-lower alkyl group, or a hydroxy-lower alkyl group.

Claim 15 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 13 wherein A represents a group of formula (2) wherein R<sup>1</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> each represent hydrogen atom and R<sup>2</sup> represents chlorine atom, bromine atom, iodine atom or nitro group, C represents methyl group, ethyl group or 2-piperidinoethoxymethyl group, and E represents methyl group, ethyl group, dimethoxymethyl group, 2-piperidinoethoxymethyl group, 2-hexamethyleneiminoethoxymethyl group, methoxymethyl group, 2-benzyloxyethoxymethyl group, 2-(2-pyridyl)ethoxymethyl group or 2-hydroxyethoxymethyl group.

Claim 16-19 (canceled).

Claim 20 (previously presented): A pharmaceutical composition comprising a dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1 and an inert carrier.

Claim 21 (previously presented) A method of treating acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis, or withdrawal symptoms after addiction to drugs, comprising administering an effective amount of a dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1 to a subject in need thereof.

Claim 22 (previously presented): A method of treating acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis, or withdrawal symptoms after addiction to drugs, comprising administering an effective amount of a dihydropyridine or pharmaceutically acceptable salt thereof according to claim 3 to a subject in need thereof.



Claim 23 (previously presented): A method of treating acute stage of ischemic cerebrovascular disorders caused by cerebral infarction or intracerebral bleeding, Alzheimer's disease, AIDS related dementia, Parkinson's disease, progressive neurodegenerative diseases, neuropathy caused by head injury, pain caused by thromboangiitis obliterans, postoperative pain, migraine, visceral pain, bronchial asthma, unstable angina, irritable colitis, or withdrawal symptoms after addiction to drugs, comprising administering an effective amount of a dihydropyridine or pharmaceutically acceptable salt thereof according to claim 12 to a subject in need thereof.

Claim 24 (previously presented): A pharmaceutical composition comprising a dihydropyridine or pharmaceutically acceptable salt thereof according to claim 3 and an inert carrier.

Claim 25 (previously presented): A pharmaceutical composition comprising a dihydropyridine or pharmaceutically acceptable salt thereof according to claim 12 and an inert carrier.

Claim 26 (canceled).

Claim 27 (currently amended): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1, wherein ~~heteroaryl-lower~~ said pyridyl-lower alkyl group ~~means is a~~ is a pyridylmethyl group, and said pyridyl-lower alkoxymethyl group is a 2-(2-pyridyl)ethoxymethyl group, a 2-(3-pyridyl)ethoxymethyl group, or a 2-(4-pyridyl)ethoxymethyl group.

Claim 28 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1 wherein C is a 2-piperidinoethoxymethyl group, a pyrrolidinylethoxymethyl group, a morpholinylethoxymethyl group, a pyridinylethoxymethyl group, or a trifluoromethyl group.

Claim 29 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1, wherein E is a dimethoxymethyl group; a methoxymethyl group; a 2-piperidinoethoxymethyl group; a 2-hexamethyleneiminoethoxymethyl group; a 2-hydroxyethoxymethyl group; a 2-benzyloxyethoxymethyl group; a 2-(2-pyridyl)ethoxymethyl group; a pyrrolidinylethoxymethyl group; a hexaoxymethyl group; a pyridinylethoxymethyl group; a morpholinylethoxymethyl group; a piperidinylethoxymethyl group, which may be substituted with benzyloxycarbonyl group; an azidoethoxymethyl group; an aminoethoxymethyl group; a carboxyethoxymethyl group; a dimethyldioxolanylethoxymethyl group; a dimethyldioxolanylethoxyethoxymethyl group; a trifluoromethyl group; or a 2,3-dihydroxypropoxymethyl group.

Claim 30 (previously presented): A dihydropyridine or pharmaceutically acceptable salt thereof according to claim 1 wherein C is a 2-piperidinoethoxymethyl group, a pyrrolidinylethoxymethyl group, a morpholinylethoxymethyl group, a pyridinylethoxymethyl group, or a trifluoromethyl group; and

wherein E is a dimethoxymethyl group; a methoxymethyl group; a 2-piperidinoethoxymethyl group; a 2-hexamethyleneiminoethoxymethyl group; a 2-hydroxyethoxymethyl group; a 2-benzyloxyethoxymethyl group; a 2-(2-pyridyl)ethoxymethyl group; a pyrrolidinylethoxymethyl group; a hexaoxymethyl group; a pyridinylethoxymethyl group; a morpholinylethoxymethyl group; a piperidinylethoxymethyl

group, which may be substituted with benzyloxycarbonyl group; a azidoethoxymethyl group; an aminoethoxymethyl group; a carboxyethoxymethyl group; a dimethyldioxolanylmethoxymethyl group; a dimethyldioxolanylmethoxyethoxymethyl group; a trifluoromethyl group; or a 2,3-dihydroxypropoxymethyl group.

Claim 31 (new): A pharmaceutical composition according to claim 20, wherein said pyridyl-lower alkyl group is a pyridylmethyl group, and said pyridyl-lower alkoxymethyl group is a 2-(2-pyridyl)ethoxymethyl group, a 2-(3-pyridyl)ethoxymethyl group, or a 2-(4-pyridyl)ethoxymethyl group.

Claim 32 (new): A pharmaceutical composition according to claim 20, wherein C is a 2-piperidinoethoxymethyl group, a pyrrolidinylethoxymethyl group, a morpholinylethoxymethyl group, a pyridinylethoxymethyl group, or a trifluoromethyl group.

Claim 33 (new): A pharmaceutical composition according to claim 20, wherein E is a dimethoxymethyl group; a methoxymethyl group; a 2-piperidinoethoxymethyl group; a 2-hexamethyleneiminoethoxymethyl group; a 2-hydroxyethoxymethyl group; a 2-benzyloxyethoxymethyl group; a 2-(2-pyridyl)ethoxymethyl group; a pyrrolidinylethoxymethyl group; a hexaoxymethyl group; a pyridinylethoxymethyl group; a morpholinylethoxymethyl group; a piperidinylethoxymethyl group, which may be substituted with benzyloxycarbonyl group; a azidoethoxymethyl group; an aminoethoxymethyl group; a carboxyethoxymethyl group; a dimethyldioxolanylmethoxymethyl group; a dimethyldioxolanylmethoxyethoxymethyl group; a trifluoromethyl group; or a 2,3-dihydroxypropoxymethyl group.

Claim 34 (new): A pharmaceutical composition according to claim 20, wherein C is a 2-piperidinoethoxymethyl group, a pyrrolidinylethoxymethyl group, a morpholinylethoxymethyl group, a pyridinylethoxymethyl group, or a trifluoromethyl group; and

wherein E is a dimethoxymethyl group; a methoxymethyl group; a 2-piperidinoethoxymethyl group; a 2-hexamethyleneiminoethoxymethyl group; a 2-hydroxyethoxymethyl group; a 2-benzyloxyethoxymethyl group; a 2-(2-pyridyl)ethoxymethyl group; a pyrrolidinylethoxymethyl group; a hexaoxymethyl group; a pyridinylethoxymethyl group; a morpholinylethoxymethyl group; a piperidinylethoxymethyl group, which may be substituted with benzyloxycarbonyl group; a azidoethoxymethyl group; an aminoethoxymethyl group; a carboxyethoxymethyl group; a dimethyldioxolanylethoxymethyl group; a dimethyldioxolanylethoxyethoxymethyl group; a trifluoromethyl group; or a 2,3-dihydroxypropoxymethyl group.

SUPPORT FOR THE AMENDMENTS

Applicants have amended Claim 1 to:

(1) replace the term “a substituted or unsubstituted heteroaryl group” with “a substituted or unsubstituted pyridyl group, a substituted or unsubstituted furyl group” in the definition of R<sup>6</sup> and R<sup>7</sup>;

(2) replace the term “a substituted or unsubstituted heteroaryl-lower alkyl group” with “a substituted or unsubstituted pyridyl-lower alkyl group, a substituted or unsubstituted furyl-lower alkyl group” also in the definition of R<sup>6</sup> and R<sup>7</sup>;

(3) replace the term “a substituted or unsubstituted heteroaryl group” with “a substituted or unsubstituted pyridyl group, a substituted or unsubstituted furyl group” in the definition of C and E;

(4) replace the term “a substituted or unsubstituted heteroaryl-lower alkyl group” with “a substituted or unsubstituted pyridyl-lower alkyl group, a substituted or unsubstituted furyl-lower alkyl group” also in the definition of C and E; and

(5) replace the term “a substituted or unsubstituted heteroaryl-lower alkoxymethyl group” with “a substituted or unsubstituted pyridyl-lower alkoxymethyl group, a substituted or unsubstituted furyl-lower alkoxymethyl group” also in the definition of C and E.

Claim 1 has also been amended for clarity. Support for amended Claim 1 can be found in the same claim as previously presented, on page 9, lines 9-17, and on page 10, line 22, to page 11, line 25, of the specification.

Claims 5, 6, 10, 12, 14, 26, and 27 have been amended to properly depend from currently amended Claim 1. Applicants have also added new Claims 31-34. Support for new Claims 31-34 can be found in Claims 27-30.

No new matter has been added. Claims 1-15, 20-25, and 27-34 remain active in this application.